STATE FOREST LAND
ENVIRONMENTAL CHECKLIST

Purpose of Checklist:

The State Environmental Policy Act (SEPA), chapter 43.21C RCW, requires all governmental agencies to consider the environmental impacts of a proposal before making decisions. An environmental impact statement (EIS) must be prepared for all proposals with probable significant adverse impacts on the quality of the environment. The purpose of this checklist is to provide information to help you and the agency identify impacts from your proposal (and to reduce or avoid impacts from the proposal, if it can be done) and to help the agency decided whether an EIS is required.

Instructions for Applicants:

This environmental checklist asks you to describe some basic information about your proposal. Governmental agencies use this checklist to determine whether the environmental impacts of your proposal are significant, requiring preparation of an EIS. Answer the questions briefly, with the most precise information known, or give the best description you can. *Questions in italics are supplemental to Ecology's standard environmental checklist. They have been added by the DNR to assist in the review of state forest land proposals. Adjacency and landscape/ watershed-administrative-unit (WAU) maps for this proposal are available on the DNR internet website at http://www.dnr.wa.gov under "SEPA Center." These maps may also be reviewed at the DNR regional office responsible for the proposal. This checklist is to be used for SEPA evaluation of state forest land activities.*

You must answer each question accurately and carefully, to the best of your knowledge. In most cases, you should be able to answer the questions from your own observations or project plans without the need to hire experts. If you really do not know the answer, or if a question does not apply to your proposal, write "do not know" or "does not apply." Complete answers to the questions now may avoid unnecessary delays later. *All of the questions are intended to address the complete proposal as described by your response to question A-11. The proposal acres in question A-11 may cover a larger area than the forest practice application acres, or the actual timber sale acres.*

Some questions ask about governmental regulations, such as zoning, shoreline, and landmark designations. Answer these questions if you can. If you have problems, the governmental agencies can assist you.

The checklist questions apply to all parts of your proposal, even if you plan to do them over a period of time or on different parcels of land. Attach any additional information that will help describe your proposal or its environmental effects. The agency to which you submit this checklist may ask you to explain your answers or provide additional information reasonably related to determining if there may be significant adverse impact.

Use of checklist for nonproject proposals:

Complete this checklist for nonproject proposals, even though questions may be answered "does not apply." IN ADDITION, complete the SUPPLEMENTAL SHEET FOR NON PROJECT ACTIONS (part D).

For nonproject actions, the references in the checklist to the words "project," "applicant," and "property or site" should be read as "proposal," "proposer" and "affected geographic area," respectively.

A. BACKGROUND

1. Name of proposed project, if applicable:
   Timber Sale Name: **Three Hour Tour (Deers Danger Part B)** *Agreement #:* **30-083260**

2. Name of applicant: **Department of Natural Resources**

3. Address and phone number of applicant and contact person:
   Northwest Region
   919 North Township St.
   Sedro - Woolley, WA 98284
   Contact Person: Laurie Bergvall
   Telephone: (360) 856-3500

4. Date checklist prepared: **September 16, 2008**

5. Agency requesting checklist: **Department of Natural Resources**

6. Proposed timing or schedule (including phasing, if applicable):

   a. *Auction Date:* **May 20, 2009**
   b. *Planned contract end date (but may be extended):* **September 30, 2011**
   c. *Phasing:*

7. Do you have any plans for future additions, expansion, or further activity related to or connected with this proposal? If yes, explain.
Yes.

Timber Sale

a. *Site preparation*: **None currently planned.**
b. *Regeneration Method:* **Hand plant with conifer seedlings within the first two years after harvest.**
c. *Vegetation Management:* **Hardwood saplings may be hand slashed 5 to 7 years after harvest.**
d. *Thinning:* **The need for a pre-commercial thinning will be assessed in 10 to 15 years. A commercial thinning is possible in 25 to 45 years.**

Roads:
Approximately 21,100 feet of new road construction or reconstruction as part of this proposal will remain open to access areas of future harvest. Required routine road maintenance on the haul route will be conducted at periodic intervals. The DL-ML, DL-10, and DL-43 roads will continue to be used for future timber sales and forest management activities.

Rock Pits and/or Sale:
Any existing rock pits, or rock pits developed in conjunction with this proposal may be used again for future timber sales.

Other: **None.**

8. List any environmental information you know about that has been prepared, or will be prepared, directly related to this proposal.
☒*303 (d) – listed water body in WAU:* ☒*temp* ☐*sediment* ☐*completed TMDL (total maximum daily load):*
One segment of Day Creek is listed for temperature. One segment of the Skagit River is listed for temperature, and fecal coliform. Contact the DNR Northwest Region office or http://www.ecy.wa.gov/programs/wq/303d/2002/2002-index.html for more information.
☐*Landscape plan:*
☐*Watershed analysis*
☐*Interdisciplinary team (ID Team) report:*
☒*Road design plan:* **Available at NW region office**
☒*Wildlife report:* **Wildlife report dated October 3, 2008 available at NW Region office**
☒*Geotechnical report:* **Geotechnical report dated October 14, 2008 available at NW region office.**
☒*Other specialist report(s):* **West Side Old Growth Assessment, September 2008, report dated 09/16/2008.**
☐*Memorandum of understanding (sportsmen's groups, neighborhood associations, tribes, etc.):*
☒*Rock pit plan:* **See the Three Hour Tour Road Plan, available at the NW Region office.**
☒*Other:* **State Soil Survey, 1992; Policy for Sustainable Forests, June 2006; Habitat Conservation Plan (HCP) & Environment Impact Statement, September 1997; HCP Riparian Forest Strategy, July 2006. Informal Conference Note, dated 09/19/2008.**

9. Do you know whether applications are pending for governmental approvals of other proposals directly affecting the property covered by your proposal? If yes, explain. **None are known at this time.**

10. List any government approvals or permits that will be needed for your proposal, if known.

☐*HPA* ☐*Burning permit* ☐*Shoreline permit* ☐*Incidental take permit* ☒*FPA #* _____ ☐*Other:*

11. Give brief, complete description of our proposal, including the proposed uses and the size of the project and site. There are several questions later in this checklist that ask you to describe certain aspects of your proposal. You do not need to repeat those answers on this page. (Lead agencies may modify this form to include specific information on project description.)

a. *Complete proposal description:*

Approximately 123 acres were evaluated for harvest with this proposal. Approximately 61 acres will remain unharvested in unstable areas, riparian management zones, leave tree areas, and marbled murrelet habitat. Approximately 1 acres will be clear-cut for road right-of-way outside proposed harvest units. The remaining 61 acres will be harvested with a variable retention harvest prescription, leaving an average of 8 trees per acre. The harvesting will take place in 2 separate units of 37 and 24 acres respectively.

Estimated volume:	**3,487 MBF**
Logging system:	**Tracked Shovel/Cable**
Landings:	**Approximately 9**
Existing rock pits :	**2**
Roads:	**Approximately 23,400 feet of road construction and reconstruction, of which 2,300 feet will be abandoned following harvest.**

b. *Timber stand description pre-harvest (include major timber species and origin date), type of harvest, overall unit objectives.*

Pre-Harvest Stand Description:

Unit 1 is predominantly mixed conifer consisting of stands that are naturally regenerated from 1931. The stand is comprised of approximately 54% DF, 34% WH, 8% WRC, 3% RA, and 1% BC. The understory is comprised of scattered swordfern, huckleberry on the ridges and salmonberry, blackberry, and devils club in the draws. Increased amounts of blowdown exist along the southern boundary due to recent logging activity in adjacent stand.

Unit 2 is predominantly mixed conifer consisting of stands that are naturally regenerated from approximately 1941. The stand is comprised of approximately 32% WH, 20% DF, 21% WRC, 26% RA, and 1% MA. Scattered old-growth remnant trees throughout the stand have been retained as legacy trees. The understory is comprised of scattered swordfern, Oregon grape, salal and huckleberry on the ridges and salmonberry, blackberry, and devils club in the draws.

Overall Proposal Objectives:

Financial – Generate long term revenue over the life of the stands, while simultaneously minimizing risk of loss, and minimize negative cash flows, consistent with other objectives.
Ecological - Protect the water quality in streams within and adjacent to the unit.
Statute/Regulatory - Comply with Forest practices rules and the HCP.
Cultural/Public – Identify and protect cultural resources by timely communication with local tribes.

b. *Road activity summary. See also forest practice application (FPA) for maps and more details.*

Type of Activity	How Many	Length (feet) (Estimated)	Acres (Estimated)	Fish Barrier Removals (#)
Construction		**1,715**	**.63**	
Reconstruction		**19,357**		**0**
Abandonment		**391**	**.14**	**0**
Temporary Construction		**1,930**	**.71**	
Bridge Install/Replace	**0**			
Culvert Install/Replace (fish)	**0**			
Culvert Install/Replace (no fish)	**19**			

12. Location of proposal. Give sufficient information for a person to understand the precise location of your proposed project, including a street address, if any, and section, township, and range, if known. If a proposal would occur over a range of area, provide the range or boundaries of the site(s). Provide a legal description, site plan, vicinity map, and topographic map, if reasonably available. While you should submit any plans required by the agency, you are not required to duplicate maps or detailed plans submitted with any permit applications related to this checklist. *(See timber sale map. See also color landscape/WAU map on the DNR website http://www.dnr.wa.gov under "SEPA Center.")*

a. Legal description:

Harvest Units:

Unit #	Section	Township	Range	E/W	County
1, Road Construction	**5**	**34**	**6**	**E**	**Skagit**
1, 2, Road Construction	**32**	**35**	**6**	**E**	**Skagit**
Road Construction	**4, 9, 10**	**34**	**6**	**E**	**Skagit**
Road Construction	**33**	**35**	**6**	**E**	**Skagit**

Existing gravel pit for this project is located at station 30+89 on the DL-ML Road in Section 33 of T35N, R06E. Existing rock pit is located at station 91-43 on the DL-43 Road in of Section 4 of T34N, R06E.

b. *Distance and direction from nearest town (include road names):* **Located 15 miles southeast of Sedro-Woolley, WA, on the Potts Road and the DL-ML Road.**

c. *Identify the watershed administrative unit (WAU), the WAU Sub-basin(s), and acres. (See also landscape/WAU map on DNR website http://www.dnr.wa.gov under "SEPA Center.")*

WAU name	**WAU acres**
Gilligan	17,383
Sub-basins	**Acres**
Sub 1	2,732
WAU name	**WAU acres**
Day Creek	23,756
Sub-basins	**Acres**
Sub 1	3,839

13. *Discuss any known future activities not associated with this proposal that may result in a cumulative change in the environment when combined with the past and current proposal(s). (See digital ortho-photos for WAU and adjacency maps on DNR website http://www.dnr.wa.gov under "SEPA Center" for a broader landscape perspective.)*

Information in the following table was compiled from the DNR's GIS database on September 25, 2008.

Name of WAU	Acres	DNR Managed Acres	Federal Managed Acres	Private Managed Acres	Non-DNR State Managed Acres	Percent DNR Managed Land	Percent Federal Managed Land	Percent Private Managed Land	Percent Non-DNR Managed Land	Proposal Acres
Gilligan	**17,383**	**3,212**	**539**	**13,413**	**219**	**18**	**3**	**77**	**1**	**49.4**
Name of Sub-Basin	Acres	DNR Managed Acres	Federal Managed Acres	Private Managed Acres	Non-DNR State Managed Acres	Percent DNR Managed Land	Percent Federal Managed Land	Percent Private Managed Land	Percent Non-DNR Managed Land	Proposal Acres
Sub 1	**2,732**	**536**	**0**	**16,846.7**	**0**	**3**	**0**	**97**	**0**	**49.4**

Name of WAU	Acres	DNR Managed Acres	Federal Managed Acres	Private Managed Acres	Non-DNR State Managed Acres	Percent DNR Managed Land	Percent Federal Managed Land	Percent Private Managed Land	Percent Non-DNR Managed Land	Proposal Acres
Day Creek	**23,756**	**1,921**	**2,254**	**19,581**	**0**	**8**	**9**	**82**	**0**	**15.8**
Name of Sub-Basin	Acres	DNR Managed Acres	Federal Managed Acres	Private Managed Acres	Non-DNR State Managed Acres	Percent DNR Managed Land	Percent Federal Managed Land	Percent Private Managed Land	Percent Non-DNR Managed Land	Proposal Acres
Sub 1	**3,839**	**755**	**12**	**22,989**	**0**	**3**	**0**	**97**	**0**	**15.8**

The table below reports recent timber harvest activity on DNR lands within the Gilligan Creek and Day Creek WAUs during the last seven years, as well as future planned timber harvests on DNR lands. The same chart also reports recent past harvesting on private lands, but no attempt was made to predict future timber harvests on private land. The attached WAU map, created in September 2008 shows the location of Department and private harvest activity.

NAME OF WAU	DNR ACRES EVEN-AGED HARVESTED IN LAST 7 YEARS	DNR ACRES UNEVEN-AGED HARVESTED IN LAST 7 YEARS	DNR EXPECTED HARVEST ACRES WITHIN NEXT YEAR	PRIVATE ACRES EVEN-AGED HARVESTED IN LAST 7 YEARS	PRIVATE ACRES UNEVEN-AGED HARVESTED IN LAST 7 YEARS
Gilligan	**325**	**0**	**40**	**1,587**	**137**
Day Creek	**199**	**11**	**0**	**1,630**	**279**

The DNR's Habitat Conservation Plan (HCP) outlines strategies to protect all Federally listed threatened and endangered species, and species that are in danger of being listed in the future, as well as uncommon habitat types found on forest lands in western Washington. HCP prescribed riparian and slope stability buffers intended to protect salmon and trout habitat were applied to this proposal and will be applied to all future sales in the vicinity. The HCP identifies large, structurally unique trees and snags as uncommon habitats that need to be protected. An average of 8 trees per acre will be left after harvest on each of the units. These trees will function for future snag and large structurally unique tree recruitment. A West Side Old Growth Assessment was conducted and concluded that the area does not meet the definition of an 'old growth stand'. However, all of the visually identifiable remnant trees were retained in a leave tree clump. The HCP strategy for protecting marbled murrelets involves surveying potential habitat blocks of habitat. One stand to the west of Unit 2 includes suitable marbled murrelet habitat, and will be surveyed for murrelets. No timber harvest will occur in this stand with this proposal. No other species or habitats designated for protection by the HCP are found near this proposal.

B. ENVIRONMENTAL ELEMENTS

1. Earth

a. General description of the site (check one):

☐Flat, ☐Rolling, ☐Hilly, ☐Steep Slopes, ☒Mountainous, ☐Other:

1) *General description of the WAU or sub-basin(s) (landforms, climate, elevations, and forest vegetation zone).*

The headwaters of the 17,382-acre Gilligan WAU originate on the steep northern slopes of Cultus and Haystack Mountains, in the southern portions of the WAU. The topography becomes more level and rolling in the northern reaches of the WAU, and Gilligan Creek drains north into the Skagit River. Elevation ranges from 36 to 4,137 feet above sea level (mean = 1,353 ft.) across the WAU. Climate is typical for western Washington with mild, maritime temperatures, and mean precipitation levels of 50-80 inches per year. The influence of the Cascade Mountain range is felt, however, as approximately 29% of the total WAU acreage is within the snow dominated zone. Conifers dominate forest stands in this region and are composed primarily of western hemlock with western redcedar in lower, wetter areas and Douglas-fir in higher, drier areas. Red alder, black cottonwood and bigleaf maple can also be found scattered and in smaller stands throughout the WAU.

The 23,756-acre Day Creek WAU, which lies east of the Gilligan WAU, also drains northward into the Skagit River. The WAU is dominated by steep, mountainous topography throughout most of its area, except where Day Creek flows into the Skagit River. Elevations within WAU range from 68 to 4,398 feet, but the mean elevation of 2,255 feet is almost twice that of the Gilligan WAU. Due to its location and topography, rainfall is much greater than in the Gilligan WAU. Roughly 85% of the WAU has mean annual precipitation levels between 70 and 80 inches. Forests are similar to those found in the Gilligan WAU, although higher proportions of Douglas-fir giving way to Pacific silver fir are present in the higher elevations.

2) *Identify any difference between the proposal location and the general description of the WAU or sub-basin(s).*
None.

b. What is the steepest slope on the site (approximate percent slope)?
75%.

c. What general types of soils are found on the site (for example, clay, sand, gravel, peat, muck)? If you know the classification of agricultural soils, specify them and note any prime farmland. *Note: The following table is created from state soil survey data. It is a roll-up of general soils information for the soils found in the entire sale area. It is only one of several site assessment tools used in conjunction with actual site inspections for slope stability concerns or erosion potential. It can help indicate potential for shallow, rapid soil movement, but often does not represent deeper soil sub-strata. The actual soils conditions in the sale area may vary considerably based on land-form shapes, presence of erosive situations, and other factors. The state soil survey is a compilation of various surveys with different standards.*

State Soil Survey #	Soil Texture	% Slope	Acres	Mass Wasting Potential	Erosion Potential
9162	gravelly silt loam	30-65	3.2	medium	medium
7439	very gravelly silt loam	30-65	37.0	medium	medium
2875	gravelly silt loam	30-65	25.0	medium	medium

d. Are there surface indications or history of unstable soils in the immediate vicinity? If so, describe.

1) *Surface indications:*

East of Unit 1 of the proposal area, there is a ¼ acre basin that was created by an old slope failure. Based on the presence of debris from a railroad trestle that crossed the basin, the failure either pre-dated or occurred simultaneously with timber harvesting in the area in the 1920s and 1930s. There is no current evidence of slope instability in this basin (i.e., no pistol-butted trees, and almost no deciduous trees or other disturbance-adapted vegetation).

To the east of Unit 1 along the property line that defines the southern boundary of the unit, there is a bedrock hollow located on a short, steep slope (65%). The channel of this hollow has previously delivered sediment and coarse woody material to an alluvial fan located at the base of the slope. Trees along the banks of the hollow show signs of slope movement; many have pistol butts at their bases, and others have been uprooted and have fallen down slope.

East of Unit 1 along the DL-43 Road (on private land that was recently harvested in July-September of 2003), there is an area where unconsolidated material was deposited. This deposition may have occurred as a result of timber harvesting in the 1920s and 1930s, though it cannot be ascertained with certainty. The material is located at the base of a 50% slope, although the slope of the material is more gentle (25-35%), giving way to an almost flat basin below.

Directly east of Unit 1 in an area proposed for road construction, there is an inner gorge landslide just west of the proposed crossing. The slide is best characterized as a rotational-transitional failure. The slide involved only a relatively small portion of the cut slope and appears to have occurred some time ago. The slide does not appear to have enlarged in an up-slope direction, nor does it appear that slide debris crossed the road and moved down slope into the stream that is the subject of the road crossing. Cut slopes immediately east of the crossing and the inner-gorge slopes appear to be relatively stable and evidence for land sliding was not observed.

Along the southwestern boundary of Unit 1 there is an old, apparently dormant deep-seated landslide.

Bedrock hollows have been identified within and adjacent to both units of the proposal area. These areas have been bound out and no harvest shall occur within these areas.

2) *Is there evidence of natural slope failures in the sub-basin(s)?*
☐*No* ☒*Yes, type of failures (shallow vs. deep-seated) and failure site characteristics:*

There is evidence of shallow slope failures in both Day Creek WAU and Sub-basin 1 of Gilligan WAU. These failures are predominantly on the steepest slopes. Most are narrow and elongated, forming where frequent avalanches and landslides do not permit the establishment of significant forest vegetation.

3) *Are there slope failures in the sub-basin(s) associated with timber harvest activities or roads?*
☐*No* ☒*Yes, type of failures (shallow vs. deep-seated) and failure site characteristics:*
Associated management activity:

Within the Day Creek WAU, some slope failures have occurred following regeneration harvesting and road construction on steep, unstable slopes.

4) *Is the proposed site similar to sites where slope failures have occurred previously in the sub-basin(s)?*
☒*No* ☐*Yes, describe similarities between the conditions and activities on these sites:*

5) *Describe any slope stability protection measures (including sale boundary location, road, and harvest system decisions) incorporated into this proposal.*

Roads were designed in Unit 1 to minimize possible impacts with potentially unstable slopes as described in question B.1.d.1 on a type 4 stream crossing. Full bench construction and end haul of excess material has been required in sensitive locations. Rock-armored fill slopes of 45 degrees are proposed for the road-fill prism. Additionally in Unit 1, timing restrictions have been placed such that no harvesting or construction of any kind will occur from November 1-March 31 and all will work will be completed in one season due to sensitive soil conditions. Under no circumstances will a waiver be granted. After operations the fill will be removed and the disturbed slopes that face the stream will be grass-seeded to reduce the potential for erosion and gullying. No other timber harvest will occur on potentially unstable slopes that could deliver to surface waters or other public resources.

e. Describe the purpose, type, and approximate quantities of any filling or grading proposed. Indicate source of fill.
Approx. acreage new roads: **1.5** *Approx. acreage new landings:* **2.25** *Fill source:* **Native material and rock from existing and proposed rock pits described in A.12.a.**

f. Could erosion occur as a result of clearing, construction, or use? If so, generally describe.
Yarding, rock and timber hauling, and road construction during periods of heavy rainfall could cause localized erosion. Any erosion should be contained on site.

g. About what percent of the site will be covered with impervious surfaces after project construction (for example, asphalt or buildings)? *Approximate percent of proposal in permanent road running surface (includes gravel roads):* **1% of the proposal area will be in permanent road running surface.**

h. Propose measures to reduce or control erosion, or other impacts to the earth, if any:
(Include protection measures for minimizing compaction or rutting.)
The following timing restrictions will be applied to the project:

- **No ground-based operations will occur from November 1 – March 31, under no circumstances will a waiver be granted due to sensitive soil conditions.**

The following strategies will be applied to proposed road construction/reconstruction/inactivation/abandonment/maintenance:

- **Soils that are exposed by road work will be revegetated.**
- **To control road related erosion, road pioneering will not extend more than 500 feet beyond completed road construction, culverts will be installed concurrently with construction of the road subgrade, and culvert outlets will not terminate on unprotected soils.**
- **No road construction, reconstruction, inactivation, or abandonment; or timber or rock haul will occur on existing or newly constructed roads from November 1 – March 31. Under no circumstances will a waiver be granted due to sensitive road conditions.**
- **On newly constructed roads cross-drain culverts will be adequate in size and frequency to prevent concentration of road runoff to the extent that it would cause gullying of stream drainages. Cross drain culverts will be placed in order to minimize the amount of ditch water that flows into surface waters. Rip-rap will be utilized at all culvert inlets and outlets to prevent erosion at these vulnerable points.**
- **2300 feet of the newly constructed road will be abandoned following harvest.**
- **All existing and new permanent roads constructed with this proposal will be maintained so that all drainage structures remain functional.**
- **Storm patrols will be conducted as necessary on existing and newly constructed roads to identify and address potential erosion problems.**

The following strategies will be applied to the proposed timber harvest:

- **Riparian (RMZ) buffers as described in 3.a.1.b and c, will be retained.**
- **The lead end of the logs will be suspended when being yarded to reduce soil disturbance.**
- **Only low-ground-pressure tracked machines will be used to conduct ground based falling and yarding.**

2. Air

a. What types of emissions to the air would result from the proposal (i.e., dust *from truck traffic, rock mining, crushing or hauling*, automobile, odors, industrial wood smoke) during construction and when the project is completed? If any, generally describe and give approximate quantities if known.
No emissions are anticipated other than minor amounts of equipment exhaust and road dust created by truck traffic.

b. Are there any off-site sources of emissions or odor that may affect your proposal? If so, generally describe.
Does not apply.

c. Proposed measures to reduce or control emissions or other impacts to air, if any:
If slash is burned, it will be burned in adherence to the State's Smoke Management Program.

3. Water

a. Surface:

1) Is there any surface water body on or in the immediate vicinity of the site (including year-round and seasonal streams, saltwater, lakes, ponds, wetlands)? If yes, describe type and provide names. If appropriate, state what stream or river it flows into. *(See timber sale map and forest practice base maps.)*

a) Downstream water bodies:
All streams associated with this proposal are tributary to Morgan Creek.

b) *Complete the following riparian & wetland management zone table:*

Wetland, Stream, Lake, Pond, or Saltwater Name (if any)	Water Type	Number (how many?)	Avg RMZ/WMZ Width in Feet (per side for streams)
Unnamed	**Type 4**	**8**	**100'**
Unnamed	**Type 5**	**19**	**0'**

c) *List RMZ/WMZ protection measures including silvicultural prescriptions, road-related RMZ/WMZ protection measures, and wind buffers.*
No timber harvest will occur within the RMZ's. All new road or existing roads through RMZ's will be monitored during hauling to ensure ditchwater will not enter or otherwise adversely affect water quality or RMZ function. Corrective action such as straw bales, silt fencing, rock-lined ditches, and sediment traps will be installed/constructed if necessary.

2) Will the project require any work over, in, or adjacent to (within 200 feet) to the described waters? If yes, please describe and attach available plans.
☐*No* ☒*Yes (See RMZ/WMZ table above and timber sale map.)*
Description (include culverts):
Timber will be felled immediately adjacent to the RMZ's described in the table in B.3.a.1.b. Timber will be felled away from all RMZ's in order to avoid damage to trees within the RMZ's. Three type 4 and four type 5 streams will be crossed with new road construction.

3) Estimate the amount of fill and dredge material that would be placed in or removed from surface water or wetlands and indicate the area of the site that would be affected. Indicate the source of fill material.
None. Culverts will be placed at stream crossings so that no fill will be placed directly into the water.

4) Will the proposal require surface water withdrawals or diversions? Give general description, purpose, and approximate quantities if known. *(Include diversions for fish-passage culvert installation.)*
☐*No* ☒*Yes, description:*
Culverts will be installed where the optional road construction will cross one type 4 stream and one type 5 stream. If this occurs, the stream may be diverted around the culvert site during the installation process. Culverts will be installed where the new required road construction will cross two type 4 and three type 5 streams. The streams may be diverted around the culvert sites during the installation process.

5) Does the proposal lie within a 100-year floodplain? If so, note location on the site plan.
☒*No* ☐*Yes, describe location:*

6) Does the proposal involve any discharges of waste materials to surface waters? If so, describe the type of waste and anticipated volume of discharge.
☒*No* ☐*Yes, type and volume:*

7) *Does the sub-basin contain soils or terrain susceptible to surface erosion and/or mass wasting? What is the potential for eroded material to enter surface water?*
Yes.
GILLIGAN WAU- SUB-BASIN 1
The Department's GIS database reports the following surface erosion and mass wasting potentials in the sub basins:

Landform	% of sub-basin
Medium soil erosion potential	43%
High soil erosion potential	5%
Medium mass wasting potential	43%
High mass wasting potential	5%

There are numerous small streams that flow through these areas, so there is a high potential for eroded material to enter surface waters.
DAY CREEK WAU- SUB-BASIN 1
The Department's GIS database reports the following surface erosion and mass wasting potentials in the sub basins:

Landform	% of sub-basin
Medium soil erosion potential	36%
High soil erosion potential	14%
Medium mass wasting potential	34%
High mass wasting potential	14%

There are numerous small streams that flow through these areas, so there is a high potential for eroded material to enter surface waters.

8) *Is there evidence of changes to the channels in the WAU and sub-basin(s) due to surface erosion or mass wasting (accelerated aggradations, erosion, decrease in large organic debris (LOD), change in channel dimensions)?*
☒*No* ☐*Yes, describe changes and possible causes:*

9) *Could this proposal affect water quality based on the answers to the questions 1-8 above?*
☐*No* ☒*Yes, explain:*
The proposed harvest activity will have little effect on stream and water quality. No harvest or road building activity will take place in areas of potential instability with the possibility of delivering sediment to streams. Road building standards, the placement of leave trees, and RMZ buffers will minimize any impacts to water quality.

10) *What are the approximate road miles per square mile in the WAU and sub-basin(s)?*
The DNR's GIS database, dated September 25, 2008, indicates the following:

WAU	Sub-basin	Road Miles per Square Mile (DNR)	Road Miles per Square Mile (Non-DNR)	Road Miles per Square Mile (Total)
Gilligan		**3**	**3.2**	**3.1**
	Sub-basin 1	**3.6**	**.3**	**.4**
Day Creek		**3.7**	**3.3**	**3.3**
	Sub-basin 1	**3.4**	**.5**	**.6**

Are you aware of areas where forest roads or road ditches intercept sub-surface flow and deliver surface water to streams, rather than back to the forest floor?
☒*No* ☐*Yes, describe:*

11) *Is the proposal within a significant rain-on-snow (ROS) zone? If not,* ***STOP HERE*** *and go to question B-3-a-13 below. Use the WAU or sub-basin(s) for the ROS percentage questions below.*
Approximately 43.5 acres of Unit 1 and Unit 2 are within the SROS zone of sub-basin 1 of the Gilligan WAU.
Approximately 4.7 acres of Unit 2 are within the SROS zone of sub-basin 1 of the Day Creek WAU.

☐*No* ☒*Yes, approximate percent of WAU in significant ROS zone.*
Gilligan WAU - 44%, Day Creek WAU - 76%
Approximate percent of sub-basin(s): **Gilligan Sub-basin 1 - 26%, Day Creek Sub-basin 1 – 39%**

12) *If the proposal is within the significant ROS zone, what is the approximate percentage of the WAU or sub-basin(s) within the significant ROS zone (all ownerships) that is (are) rated as hydrologically mature?*
The percentage of sub-basin 1 in the Gilligan WAU in the significant ROS zone rated as hydrologically mature for all ownerships is 41%.
The percentage of sub-basin 1 in the Day Creek WAU in the significant ROS zone rated as hydrologically mature for all ownerships is 52%.

13) *Is there evidence of changes to channels associated with peak flows in the WAU or sub-basin(s)?*
☒*No* ☐*Yes, describe observations:*
There is no known evidence of channel changes resulting from peak flows in either WAU.

14) *Based on your answers to questions B-3-a-10 through B-3-a-13 above, describe whether and how this proposal, in combination with other past, current, or reasonably foreseeable proposals in the WAU and sub-basin(s), may contribute to a peak flow impact.*
The scientific data used to develop the Department's HCP policy on rain-on-snow suggests the following: Measurable damage to salmonid fish habitat (i.e. destabilization and transport of coarse woody debris, excessive sedimentation that fills in pools, and destruction of salmon redds) occurs when peak flows are increased by an amount equivalent to what would be generated by increasing the 10-year, 24-hour storm by 1 inch.

This threshold is believed to be exceeded in sub-basins that have at least 1/3 of their area in the significant rain-on-snow zone, and less than 2/3 of the forest in the rain-on-snow zone is in a hydrologically mature state.

Since only 26% (<1/3) of Gilligan WAU sub-basin 1 is within the significant ROS zone, this sub-basin is not believed to be vulnerable to a damaging increase in peak flows due to timber harvest.

Since 39% (>1/3) of Day Creek WAU sub-basin 1 is within the significant ROS zone, and only 52% (<2/3) of this sub-basin is rated as hydrologically mature, it is likely that negative impacts to fish habitat are occurring. This proposal will further reduce the percentage of hydrologically mature forest <1% in sub-basin 1 of the Day Creek WAU after harvest. It is not known what further effect this will have on fish habitat. Since the Department owns <50% of the significant ROS zone, it does not manage for rain-on-snow impacts. The Department only manages for ROS impacts when it manages at least 50% of the significant ROS zone within a sub-basin.

15) *Is there water resource (public, domestic, agricultural, hatchery, etc.), or area of slope instability, downstream or downslope of the proposed activity that could be affected by changes in surface water amounts, quality, or movements as a result of this proposal?*
☒*No* ☐*Yes, possible impacts:*

16) *Based on your answers to questions B-3-a-10 through B-3-a-15 above, note any protection measures addressing possible peak flow/flooding impacts.*
In order to minimize the risk of road failures during peak flow events, all culverts utilized in new road construction will be sized to withstand a 100-year flood event. Culverts and ditches will be periodically maintained so that they remain functional. Storm patrols will be conducted as necessary on existing and newly constructed roads to identify and address potential erosion problems.

b. *Ground Water:*

1) *Will ground water be withdrawn, or will water be discharged to ground water? Give general description, purpose, and approximate quantities if known.*
Channelized water through ditches and culverts emptying out onto the forest floor will increase surface saturation in localized areas, but is not expected to affect ground water.

2) *Describe waste material that will be discharged into the ground from septic tanks or other sources, if any (for example: Domestic sewage; industrial, containing the following chemicals; agricultural; etc.). Describe the general size of the system, the number of such systems, the number of houses to be served (if applicable), or the number of animals or humans the system(s) are expected to serve.*
Insignificant amounts of oil and lubricants could be inadvertently spilled as a result of heavy equipment use. No lubricants will be disposed of on site.

3) *Is there a water resource use (public, domestic, agricultural, hatchery, etc.), or area of slope instability, downstream or down slope of the proposed activity that could be affected by changes in groundwater amounts, timing, or movements as a result this proposal?*
☒*No* ☐*Yes, describe:*

a) *Note protection measures, if any.*
None.

c. *Water Runoff (including storm water):*

1) *Describe the source of runoff (including storm water) and method of collection and disposal, if any (include quantities, if known). Where will this water flow? Will this water flow into other waters? If so, describe.*
Storm water runoff from landings and road surfaces will be collected by ditches, and then diverted through cross drain culverts onto the forest floor. Culverts will be placed to minimize the amount of ditch water entering existing streams.

2) *Could waste materials enter ground or surface waters? If so, generally describe.*
It is unlikely that any waste materials could enter any surface or ground water.
a) *Note protection measures, if any.*
None.

d. *Proposed measures to reduce or control surface, ground, and runoff water impacts, if any:*
(See surface water, ground water, and water runoff sections above, questions B-3-a-1-c, B-3-a-16, B-3-b-3-a, and B-3-c-2-a.)
Storm water runoff will be collected by landings, road surfaces and ditches, and then diverted through cross drain culverts onto the forest floor. Culverts will be placed to minimize the amount of ditch water entering existing streams. Seasonal yarding restrictions will prevent channelizing of run-off. Cut banks created by new road construction will be grass-seeded.

4. Plants

a. *Check or circle types of vegetation found on the site:*

☒deciduous tree: ☒alder, ☒maple, ☐aspen, ☐*cottonwood,* ☐*western larch,* ☐*birch,* ☒other: **Cherry**
☒evergreen tree: ☒*Douglas fir,* ☐*grand fir,* ☐*Pacific silver fir,* ☐*ponderosa pine,* ☐*lodgepole pine,* ☒*western hemlock,* ☐*mountain hemlock,* ☐*Englemann spruce,* ☒*Sitka spruce,* ☒*red cedar,* ☐*yellow cedar,* ☐other:
☒shrubs: ☒*huckleberry,* ☒*salmonberry,* ☐*salal,* ☒*other:* **Swordfern, Vine maple**
☒grass
☐pasture
☐crop or grain
☒wet soil plants: ☐cattail, ☐buttercup, ☐bullrush, ☒skunk cabbage, ☒*devil's club,* ☐other:
☐water plants: ☐water lily, ☐eelgrass, ☐milfoil, ☐other:
☐other types of vegetation:
☐*plant communities of concern:*

b. *What kind and amount of vegetation will be removed or altered? (See answers to questions A-11-a, A-11-b, B-3-a-1-b and B-3-a-1-c. The following sub-questions merely supplement those answers.)*

1) *Describe the species, age, and structural diversity of the timber types immediately adjacent to the removal area. (See landscape/WAU and adjacency maps on the DNR website at: http://www.dnr.wa.gov under "SEPA Center.")*

UNIT 1
North– 10 year old conifer plantation that is about 59 acres in size.
West – 2 year old conifer plantation 58 acres in size separated by a double wide RMZ.
East – RMZ for 100'that is similar to the unit, then 2 year old conifer plantation, approximately 52 acres in size.
South –Recent regeneration harvest on private land approximately 40 acres in size.

UNIT 2
North– 19 year old conifer plantation approximately 132 acres in size.
South – 68 year old mixed conifer stand that is about 44 acres in size.
East – 19 year old conifer plantation approximately 132 acres in size.
West – 83 year old mixed conifer stand with scattered old-growth approximately 67 acres in size.

2) *Retention tree plan:*
An average of 8 trees per acre will be left in scattered leave trees and 9 clumps that are distributed across the proposed harvest area. Numerous smaller trees, mostly western hemlock and western redcedar < 12" dbh will also be left in these clumps, but were not counted in the total. These clumps contain trees from all species found in the vicinity of the proposal and are located around features that will contribute to the maintenance of biological diversity such as snags, down logs, areas with extensive understory development, and large wind firm conifer trees.

c. *List threatened or endangered plant species known to be on or near the site.*
The DNR's TRAX database does not indicate any such plants.

d. Proposed landscaping, use of native plants, or other measures to preserve or enhance vegetation on the site, if any:
The site will be replanted with conifer seedlings after harvest. See green tree retention plan in B.4.b.2.

5. Animal

a. *Circle or check any birds animals or unique habitats which have been observed on or near the site or are known to be on or near the site:*

birds: ☒hawk, ☒heron, ☒eagle, ☒songbirds, ☐*pigeon,* ☒other: **barred owl & raven**
mammals: ☒deer, ☒bear, ☐elk, ☐beaver, ☐other:
fish: ☐bass, ☒salmon, ☒trout, ☐herring, ☐shellfish, ☐other:
unique habitats: ☒*talus slopes,* ☒*caves,* ☒*cliffs,* ☐*oak woodlands,* ☐*balds,* ☐*mineral springs*

b. *List any threatened or endangered species known to be on or near the site (include federal- and state-listed species).*
DNR's Trax system indicates no known threatened, endangered, or special concern species on or near the sale area.

c. *Is the site part of a migration route? If so, explain.*
☒*Pacific flyway* ☐*Other migration route:* *Explain if any boxes checked:*
All of Washington State is considered part of the Pacific Flyway. No impacts are anticipated as a result of this proposal.

d. *Proposed measures to preserve or enhance wildlife, if any:*

1) *Note existing or proposed protection measures, if any, for the complete proposal described in question A-11.*

Species/Habitat: **Fish Habitat**	Protection Measures: **Stream protection measures listed in B.3.a.1.b.c., B.3.a.2. Soil protection measures in B.1.h. Slope stability protection in B.1.D.5., and peak flow protection in B.3.a.16.**
Species/Habitat**: Mature Forest Components**	Protection Measures: **Retention tree plan described in B.4.b.2.**
Species/Habitat: **Marbled Murrelets**	Protection Measures: **The Department is developing a long-term conservation strategy for marbled murrelets. Timber stands with a high probability of being used by marbled murrelets have been deferred from harvest while surveys are being conducted in these stands to determine actual murrelet use. One of the stands scheduled to be surveyed is located to the west of proposed harvest Unit 2. The newly-identified and unsurveyed habitat falls in our Criteria 2 (intermediate) category. No timber harvest will occur in this stand with this proposal.**

6. **Energy and Natural Resources**

a. *What kinds of energy (electric, natural gas, oil, wood stove, solar) will be used to meet the completed project's energy needs? Describe whether it will be used for heating, manufacturing, etc.*
Does not apply.

b. *Would your project affect the potential use of solar energy by adjacent properties? If so, generally describe.*
Does not apply.

c. *What kinds of energy conservation features are included in the plans of this proposal? List other proposed measures to reduce or control energy impacts, if any:*
Does not apply.

7. **Environmental Health**

a. *Are there any environmental health hazards, including exposure to toxic chemicals, risk of fire and explosion, spill, or hazardous waste, that could occur as a result of this proposal? If so, describe.*
There is a minimal hazard from heavy equipment operations. There is a potential fire hazard if operating during severe fire weather conditions during the summer.

1) *Describe special emergency services that might be required.*
None.

2) *Proposed measures to reduce or control environmental health hazards, if any:*
None.

b. *Noise*

1) *What types of noise exist in the area which may affect your project (for example: traffic, equipment, operation, other)?*
None.

2) *What types and levels of noise would be created by or associated with the project on a short-term or long-term basis (for example: traffic, construction, operation, other)? Indicate what hours noise would come from this site.*
Noise from log trucks and logging equipment will be present while operating during daylight hours.

3) *Proposed measures to reduce or control noise impacts, if any:*
None.

8. Land and Shoreline Use

a. *What is the current use of the site and adjacent properties? (Site includes the complete proposal, e.g. rock pits and access roads.)*
Timber production.

b. *Has the site been used for agriculture? If so, describe.*
No.

c. *Describe any structures on the site.*
None.

d. *Will any structures be demolished? If so, what?*
No.

e. *What is the current zoning classification of the site?*
Industrial Forestry.

f. *What is the current comprehensive plan designation of the site?*
Industrial Forestry.

g. *If applicable, what is the current shoreline master program designation of the site?*
Does not apply.

h. *Has any part of the site been classified as an "environmentally sensitive" area? If so, specify.*
No.

i. *Approximately how many people would reside or work in the completed project?*
Does not apply.

j. *Approximately how many people would the completed project displace?*
Does not apply.

k. *Proposed measures to avoid or reduce displacement impacts, if any:*
Does not apply.

l. *Proposed measures to ensure the proposal is compatible with existing and projected land uses and plans, if any:*
The design of this project is consistent with current comprehensive plans and zoning regulations.

9. Housing

a. Approximately how many units would be provided, if any? Indicate whether high, middle, or low-income housing.
Does not apply.

b. Approximately how many units, if any, would be eliminated? Indicate whether high, middle, or low-income housing.
Does not apply.

c. Proposed measures to reduce or control housing impacts, if any:
Does not apply.

10. Aesthetics

a. What is the tallest height of any proposed structure(s), not including antennas; what is the principle exterior building material(s) proposed?
Does not apply.

b. What views in the immediate vicinity would be altered or obstructed?
Mixed conifer and mixed hardwood forests will be converted to conifer plantations with reserve trees.

1) *Is this proposal visible from a residential area, town, city, developed recreation site, or a scenic vista?*
☐ *No* ☒ *Yes, viewing location:*
Both units of this proposal will be visible from the city of Lyman, WA and the town of Day Creek, WA.

2) *Is this proposal visible from a major transportation or designated scenic corridor (county road, state or interstate highway, US route, river, or Columbia Gorge SMA)?*
☐*No* ☒*Yes, scenic corridor name:*
Both units of this proposal will be visible from the Hwy 20, and the South Skagit Hwy.

3) *How will this proposal affect any views described in 1) or 2) above?*
Although this proposal will be visible to the public, the majority of the landscape where this proposal will occur is managed as commercial forest land, and as such consists of forest stands with a wide range of age classes, including recent clear-cuts. For this reason, it is unlikely that this harvest will draw a lot of attention.

c. Proposed measures to reduce or control aesthetic impacts, if any:
Retention trees as described in B.4.b.2 and RMZ buffers as described in B.3.a.1.b will reduce the aesthetic impacts of the harvest.

11. Light and Glare

a. What type of light or glare will the proposal produce? What time of day would it mainly occur?
Does not apply.

b. Could light or glare from the finished project be a safety hazard or interfere with views?
Does not apply.

c. What existing off-site sources of light or glare may affect your proposal?
Does not apply.

d. Proposed measures to reduce or control light and glare impacts, if any:
Does not apply.

12. Recreation

a. What designated and informal recreational opportunities are in the immediate vicinity?
None.

b. Would the proposed project displace any existing recreational uses? If so, describe:
No.

c. Proposed measures to reduce or control impacts on recreation, including recreation opportunities to be provided by the project or applicant, if any:
None.

13. Historic and Cultural Preservation

a. Are there any places or objects listed on, or proposed for national, state, or local preservation registers known to be on or next to the site? If so, generally describe.
None known.

b. Generally describe any landmarks or evidence of historic, archaeological, scientific, or cultural importance known to be on or next to the site.
None.

c. Proposed measures to reduce or control impacts, if any:
(Include all meetings or consultations with tribes, archaeologists, anthropologists or other authorities.)
Both the Skagit Systems Cooperative and the Upper Skagit Tribes were contacted. Neither expressed concerns about archaeological or historical resources in the proposal area.

14. Transportation

a. Identify public streets and highways serving the site, and describe proposed access to the existing street system. Show on site plans, if any.
The South Skagit Hwy, the Potts Road, and the DL-ML and DL-43 forest roads.

1) *Is it likely that this proposal will contribute to an existing safety, noise, dust, maintenance, or other transportation impact problem(s)?*
No.

b. Is site currently served by public transit? If not, what is the approximate distance to the nearest transit stop?
No. The distance to the nearest transit stop is not known.

c. How many parking spaces would the completed project have? How many would the project eliminate?
Does not apply.

d. Will the proposal require any new roads or streets, or improvements to existing roads or streets, not including driveways? If so, generally describe (indicate whether public or private).
See question A-11 of this checklist for the background description of this completed proposal, which includes a road summary. See also the attached FP Application Roads Section. A complete detailed road plan is available at the DNR NW region office.

1) How does this proposal impact the overall transportation system/circulation in the surrounding area, if at all?
No impacts are expected.

e. Will the project use (or occur in the immediate vicinity of) water, rail, or air transportation? If so, generally describe.
No.

f. How many vehicular trips per day would be generated by the completed project? If known, indicate when peak volumes would occur.
It is estimated that 16 trips per day would occur during active logging operations. Once the logging has been completed, no new vehicular trips will be necessary except for periodic road maintenance and stand assessments/maintenance.

g. Proposed measures to reduce or control transportation impacts, if any:
None.

15. Public Services

a. Would the project result in an increased need for public services (for example: fire protection, police protection, health care, schools, other)? If so, generally describe.
No.

b. Proposed measures to reduce or control direct impacts on public services, if any.
None.

16. Utilities

a. Circle utilities currently available at the site: electricity, natural gas, water, refuse service, telephone, sanitary sewer, septic system, other.
None.

b. Describe the utilities that are proposed for the project, the utility providing the service, and the general construction activities on the site or in the immediate vicinity which might be needed.
None.

C. SIGNATURE

The above answers are true and complete to the best of my knowledge. I understand that the lead agency is relying on them to make its decision.

Completed by: _____ Date: 8/3/19
Title